

Claims:

1. A platen press, comprising:

a) a fixed bolster and a movable bolster between which is positioned at least one platen;

b) at least one fluid pressure operated jack cylinder for moving said movable bolster to a closed position;

c) a main, pressurizing cylinder for applying a clamping force to said platen when the movable bolster is in its closed position;

d) a first source of pressurized fluid, said pressurized fluid of said first source being at a first pressure;

e) a second source of pressurized fluid, said pressurized fluid of said second source being at a second pressure;

f) said second pressure being lower than said first pressure;

g) control valving for communicating said first source of pressurized fluid with said jack cylinder while concurrently communicating said second source of pressurized fluid with said main cylinder, during a press closing step of a press operating cycle;

h) said control valving being further operative, during a clamping step of the platen press operating cycle, to communicate said first source of pressurized fluid with said main cylinder while terminating the communication of said second source of pressurized fluid with said main cylinder.

2. The platen press of claim 1 wherein said platen press comprises a plurality of jack cylinders and a plurality of main cylinders.

3. The apparatus of claim 1 wherein said first source of pressurized fluid comprises at least one positive displacement pump.

4. The platen press of claim 1 wherein said first source of pressurized fluid comprises at least one positive displacement pump and an accumulator for accumulating pressurized fluid delivered by said pump during portions of the press

operating cycle.

5. The platen press of claim 1 wherein said second source of pressurized fluid comprises at least one high volume, centrifugal pump.

6. The platen press of claim 1 wherein said second source of pressurized fluid comprises a fluid pump feeding an accumulator.

7. The platen press of claim 1 wherein said second source of pressurized fluid comprises a flow intensifier for delivering fluid to and receiving fluid from said main cylinder during press closing and press opening portions of the operating cycle of said platen press, respectively.

8. The platen press of the claim 7 wherein said flow intensifier includes a positive displacement pump for communicating fluid under pressure to an input side of a flow intensifier unit, the output of said flow intensifier being connectable to said main cylinder during portions of said press operating cycle.

9. A method of operating a platen press, the platen press including a fixed bolster, a movable bolster, at least one platen position between said bolsters and at least one jack cylinder and one main cylinder operatively connected to said movable bolster, comprising the steps of

a) communicating pressurized fluid at a first pressure from a first source to said jack cylinder while concurrently communicating pressurized fluid at a second pressure, from a second source to said main cylinder, during a press closing cycle;

b) upon press closure, communicating pressurized fluid from said first source to said main cylinder in order to generate a clamping force on said platen;

c) communicating said jack cylinder and said main cylinder to respective discharge conduits in order to permit opening of said platen press during a press opening step.

10. The method of the claim 9 wherein the communication of said first source of pressurized fluid comprises a step of energizing at least one positive displacement pump and communicating the output of said pump with said jack cylinder.

11. The method of the claim 9 wherein said step of communicating said first source of pressurized fluid comprises communicating a stored source of pressurized fluid with said jack cylinder.

12. The method of the claim 10 wherein said step of communicating said second source of pressurized fluid comprises the step of activating a high volume, centrifugal pump and connecting its output to said main cylinder.

13. The method of the claim 10 wherein said step of communicating said second source of pressurized fluid comprises a step of activating a positive displacement pump in order to operate a flow intensifier, the output of which is connected to said main cylinder.

14. The method of claim 10 wherein said step of communicating said second source of pressurized fluid comprises a step of communicating an accumulator containing stored pressurized fluid with said main cylinder.

15. The method of claim 10 wherein said movable bolster is moved to its open position by communicating said jack and main cylinders with a fluid reservoir and allowing the weight of said movable bolster to urge the movable bolster to its open position.

16. For a platen press of the type having fixed and movable bolsters, a plurality of jack cylinders for moving the movable bolster to a closed position and a plurality of clamping cylinders for exerting a clamping force on one or more platens held between the fixed and movable bolsters, the improvement comprising:

- a) a first source of pressurized fluid including at least one positive displacement pump for supplying pressurized fluid at a first pressure;
- b) a second source of pressurized fluid including a fluid supplying device capable of providing pressurized fluid at a relatively high volume and at a second pressure less than said first pressure;
- c) a control system including control valving for communicating said first source of pressurized fluid to said jack cylinders while concurrently communicating said second source of pressurized fluid with said main cylinders in order to move said movable bolster to a closed position; and,
- d) said control valving being further operative when said bolster is in its closed position, to communicate said first source of pressurized fluid to said main cylinders while terminating the communication of said second source of pressurized fluid with said main cylinders.

17. The improvement of claim 16 further comprising control valving for communicating said jack and main cylinders with a fluid reservoir in order to discharge fluid from the main and jack cylinders, whereby said movable bolster is moved to an open position.

18. The improvement of claim 17 wherein said control valving comprises a plurality of solenoid operated control valves.

19. The improvement of claim 16 wherein said first source of pressurized fluid comprises a plurality of positive displacement pumps.

20. The improvement of claim 19 wherein said first source of pressurized fluid further comprises an accumulator supplied with pressurized fluid by at least one of said positive displacement pumps.

21. The improvement of claim 16 wherein said second source of pressurized

fluid comprises a plurality of high volume, centrifugal pumps.

22. The improvement of claim 16 wherein said second source of pressurized fluid comprises an accumulator fed by a fluid pump.

23. The improvement of claim 16 wherein said second source of pressurized fluid comprises a flow intensifier system which includes at least one flow intensifier unit operated by a fluid pump with the output of said flow intensifier unit being connectable to said main cylinders, whereby fluid can be delivered to, and received from, said main cylinders as said movable bolster moves to its closed position and as said movable bolster moves to its open position, respectively.